Payment Card Interchange Fees: An Economic Assessment

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Summary

Interchange fees in the processing of credit and debit cards have become controversial. An interchange fee is paid by the merchant’s bank to a cardholder’s bank (that issued the card) after the cardholder purchases goods or services with a payment (credit or debit) card. Merchants and cardholders asserts that they must accept excessive and increasing interchange fees set by the card associations such as Visa and MasterCard and member card-issuing banks. Interchange fees have been rising since the 1990s, despite diminishing fraud losses and technological advances in communications that lower the costs of accessing the electronic payment system. Merchants argue that the card associations have not negotiated these fees with them but instead present the fees as “take it or leave it” offers.

Economists who have studied the payment card markets attribute the higher interchange fees to the nature and structure of the market. This is not the traditional market, they point out, but a two-sided market where suppliers compete for two types of customers with different demand responses, like a newspaper that must attract both readers and advertisers. In the payment card market, banks must attract cardholders and merchants, and a transfer of revenues is usually necessary to provide card-issuing banks an incentive to issue more cards, which provide more payment card users to merchants. This is similar to newspapers, where the lower the subscription rates, the higher the readership and the higher the advertiser revenues. For a payment card system that needs more cardholders to achieve the optimal benefits to cardholders and merchants, more revenue transfers may be needed to offset the cost of issuing more cards to cardholders. There could be cases, however, where the revenue transfers are excessive, which would mean that the interchange fees are providing excess profits to issuer banks.

A potential issue relates to possibly imposing legal or regulatory caps on the interchange fees the associations and issuing banks receive, as in the case of Australia and the United Kingdom. Specifically, the concern is whether there is a mechanism that will be used to make sure that merchants lower their prices to pass the excess revenues back to the cardholders. In countries where interchange fees are capped, the governments have been relying on merchants to voluntarily lower prices. Yet, there is no formal evidence that merchants have lowered their prices because of the lower interchange fee caps.

This report focuses on the Visa and MasterCard card associations, which account for three-fourths of the payment card market in the United States in 2008. The report begins with a discussion of the nontraditional structure of the payment card market. The next section is an analysis of the problem of the optimum level of payment cards to achieve the highest social welfare benefit for cardholders and merchants. The third section discusses the provisions of the Credit Card Fair Free Act of 2008 (H.R. 5546). The last section discusses some implications of the analysis.

This report will be updated as financial and legislative developments warrant.
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Payment Card Interchange Fees:
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Introduction

Payment card interchange fees, which were paid without contention for almost seven decades, are now the source of a controversy. An interchange fee is paid by the merchant’s bank to a cardholder’s bank (that issued the card) after the cardholder purchases goods or services with a payment (credit or debit) card. House Judiciary Chairman John Conyers Jr. has established a congressional task force to look into interchange fees because some merchant and consumer groups have complained that these fees are cutting into merchants’ profits and are costing the cardholders and non-cardholders, who ultimately pay the fee in the price of the goods or services.\(^1\) According to Chairman Conyers, “In 2005, U. S. families paid an average of more than $300 for hidden interchange fees including households that do not even use credit cards.”\(^2\) Another source estimated that, “In 2007, retail merchants in the United States will pay banks issuing Visa and MasterCard payment cards more than $30 billion in collectively set per transaction interchange fees.”\(^3\) At issue are increases in interchange fees set by the credit card associations like Visa and MasterCard and card-issuing banks or companies like Discover and American Express to enable merchants to gain access to the associations’ and issuers’ electronic payment network.

Interchange fees have been rising since the 1990s, despite diminishing fraud losses and technological advances in communications that lowered the costs of accessing the electronic payment system.\(^4\) Merchants argue that the card associations have not negotiated these fees with them but instead present them as take it or leave it offers. Economists who have studied the payment card market attribute the higher

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1 Non-users of payment cards pay interchange fees because merchants usually raise their prices to compensate them for the costs of accepting payment cards. These higher prices are paid by all their customers.


Two-sided markets compete for two types of customers with different elasticities of demand. A good example is a newspaper that must attract both readers and advertisers. To optimize output in both markets, the equilibrium price depends on the price elasticities of demand of customers on both sides, the network effect, and the marginal costs resulting from changing output on each side. In this example, newspapers usually provide newspapers to readers below their marginal production and distribution costs in order to build sufficient readerships to attract advertisers. Raising the subscription rates for the newspaper will not only lead to fewer readers, but also less advertising revenues because revenues are a function of the number of readers. The two-sided market limits a firm’s ability to retain excess profit. A monopoly newspaper might be able to increase subscription rates to readers, but in doing so it might have to compete away its profits to attract advertising revenues. Two-sided markets differ from ordinary markets. In most markets, price collusion generally leads to harm to consumers by enabling competitors to restrict output and raise prices. Two-sided markets cannot be presumed to behave anti-competitively based on the assumptions applied to standard markets, but they can be anti-competitive nonetheless. See Steve Semeraro, “Credit Card Interchange Fees: Three Decades of Antitrust Uncertainty,” Thomas Jefferson School of Law, San Diego, California, Legal Studies Research Paper Series, March 6, 2007, p. 43.

This report focuses on the Visa and MasterCard card associations that account for three-fourths of the payment card market, with Visa accounting for 44% and MasterCard accounting for 31% of the market in the United States in 2008. The report does not discuss unitary payment card systems such as American Express and Discover cards that issue virtually all their own cards and sign up their own

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5 Two-sided markets compete for two types of customers with different elasticities of demand. A good example is a newspaper that must attract both readers and advertisers. To optimize output in both markets, the equilibrium price depends on the price elasticities of demand of customers on both sides, the network effect, and the marginal costs resulting from changing output on each side. In this example, newspapers usually provide newspapers to readers below their marginal production and distribution costs in order to build sufficient readerships to attract advertisers. Raising the subscription rates for the newspaper will not only lead to fewer readers, but also less advertising revenues because revenues are a function of the number of readers. The two-sided market limits a firm’s ability to retain excess profit. A monopoly newspaper might be able to increase subscription rates to readers, but in doing so it might have to compete away its profits to attract advertising revenues. Two-sided markets differ from ordinary markets. In most markets, price collusion generally leads to harm to consumers by enabling competitors to restrict output and raise prices. Two-sided markets cannot be presumed to behave anti-competitively based on the assumptions applied to standard markets, but they can be anti-competitive nonetheless. See Steve Semeraro, “Credit Card Interchange Fees: Three Decades of Antitrust Uncertainty,” Thomas Jefferson School of Law, San Diego, California, Legal Studies Research Paper Series, March 6, 2007, p. 43.

6 Ibid., Steve Semeraro, p. 45.


merchants. This report does not analyze the application of antitrust statutes to interchange fees. The report begins with a discussion of the nontraditional structure of the payment card market. The next section is an analysis of the problem of the optimum level of payment cards to achieve the highest social welfare benefit for cardholders and merchants. The third section discusses the provisions of the Credit Card Fair Free Act of 2008 (H.R. 5546), and the last section discusses the implications of the analysis.

The Cost Structure in a Payment Card Transaction

There are several components of cost in a payment card transaction. When a consumer makes a purchase with a payment card, the merchant’s account at the merchant’s bank, the acquirer bank, is credited with the purchase amount, less an amount called the merchant discount fee. The merchant discount fee consists of a flat rate in the amount ranging from a few cents to a dollar or a percentage amount of the purchase. The total fees usually range from 1% to 3% but could be as high as 15% for merchants who are of high risk because of low transaction volume, limited credit history, or the nature of their business.\(^\text{10}\) The acquirer bank retains part of the merchant discount fee, and the remainder is remitted to the network association. The interchange fee is this remittance to the network association. The remittance to the card issuer is also called the interchange fee. The network association that receives the remittance from the acquiring bank keeps a small portion of it for the costs of authorization, clearing, and settling the transaction. The association remits the rest to the issuer bank to cover the costs of funding the purchase, chargebacks (returns), and fraud risks.

The network association sets the interchange rates annually. The level of the fees charged by the network is partially based on the interchange rate, which is set by the issuing and acquirer banks. Thus, the merchant discount fee is the interchange rate plus an additional percentage taken by the acquirer bank. However, the interchange rate does not vary much on the basis of the cost of the transaction. It varies mainly on the merchant’s type and the level of bundled reward points attached to a particular payment card. As mentioned above, the merchant’s discount fee varies by the merchant’s risk profile and the acquirer bank profit component of the fee. Overall, the interchange rates are lower in stable, low-margin industries like groceries and higher in small volume, high-risk businesses like adult Internet websites.

Merchant Restraints

Explicit costs in the Visa or MasterCard association network reflect the associations’ rules. These rules include merchant restraints that are designed to increase card usage at the expense of all other types of payments and to maintain higher interchange rates: (1) Merchants are forbidden to impose a surcharge for the use of payment (credit or debit) cards [no surcharge rule], even though card transactions cost merchants more than some other payment methods. The effect is

to prevent merchants from passing on the cost of the payment card directly to their customers, who use the card, which would give their customers a disincentive to use the card. Thus, the merchants absorb the payment card transaction costs. (2) Merchants are required to take all credit cards bearing the card association brand [honor-all-cards rule], and they are required to accept these cards at all outlets [all-outlets rule]. In addition, (3) merchants are prohibited from offering discounts to particular types of cards [non-differentiation rule]. These rules prevent merchants from operating at overall minimum cost because the rules force them to accept all [all or none rule] the association’s cards, even though different cards have different costs attached to them.

To summarize the description of the mechanism, Figure 1 shows an example in which the merchant discount fee is 2.6% as set by the banks and the card association. For this discount, the merchant may attract cardholder customers and potentially higher sale volume, guaranteed payments, and reduced administration and accounting costs, as well as increase checkout efficiency. On the cardholder side, the card issuer bank issues payment cards to cardholders at its own costs, including card production and advertisements. In the beginning of card issuance, cardholders paid an annual fees for most cards. Today, issuer banks are profitable enough from the lines of credit attached to their cards as well as related fees (such as late and overdraft fees) that they generally no longer demand annual fees. More important, issuer banks are in highly competitive markets where the elasticity of demand for payment cards is high enough to force the fees to practically zero.

In a card association network, the association serves as an active umbrella organization for four parties: (1) the acquiring bank and (2) the merchant, on one side, and (3) the issuing bank and (4) the cardholder, on the other. Starting at the bottom of Figure 1, the cardholder purchases goods or services for $100.00 with a payment card. The accounting information goes to the merchant’s acquirer bank as an account receivable. The acquirer bank credits the merchant’s account $97.40, which is the merchant discount that was agreed to by accepting the card. The acquirer bank takes a 0.5% fee for its services and asks the card association for authorization for the $100.00 payment. The association sends the acquirer bank a payment of $97.90 as the association deducts its 0.1% for authorization, clearing and settling fees from the amount it receives from the issuer bank. The card association then requests authorization from the payment card’s issuer banks, which sends the card association $98.00, after deducting its 2% interchange fee from the $100.00.
The issuer bank usually extends the $100.00 credit to the cardholder if the payment card is a credit card, and there is no balance on the credit card, in which case, the cardholder enjoys the $100.00 float. The float is the use of the funds in transition of payment until the payment is actually collected by the issuer bank. The value of the float to the cardholder depends on the market rate of interest and when the purchase is made in the cardholder’s payment cycle. On the other hand, if the payment card is a debit card, the issuer bank may deduct the $100.00 from the cardholder’s deposit account immediately. In either case, processing is done electronically in seconds where all five parties are credited and debited the appropriate amounts.

The Optimal Payment Card System

Students of the process of setting interchange fees, which include regulatory authorities, economists, and lawyers, have offered two proposed solutions to rising interchange fees. The first would regulate the cost that a card system may use to calculate its interchange fees. The second would permit merchants to put a surcharge on payment card transactions so that interchange fees could be passed on directly to the cardholder using the credit card. Each of these solutions has its own problems in terms of maximizing the overall social benefits of a payment card system.
The Problem with Cost Regulation

It is argued that interchange fees based on card issuers’ cost (which is now implemented in several countries, such as Australia) could solve the problem of rising interchange fees. Others argue that interchange fees should be abolished, set to zero. Issuers can cover their costs by raising interest rates and annual fees for the card. However, economists have pointed out that price regulations based on costs have historically been plagued with practical problems even in industries in which theory would predict that the optimal price can be based on cost. The practical reason for these theories’ failure to determine the optimal price based on costs is that a firm has little incentive to cut cost if its revenues are tied to those costs. However, in the case of interchange fees, economic theory also suggests that cost-based regulation would not be expected to produce the optimal interchange fee.

Economists have shown that, because of the nature of the credit card market, it would be very unlikely that the optimal interchange fee could be reached by setting it at zero or determining it strictly on a cost-based measure. As we can see from Figure 1, the credit card market is two-sided: services are being sold to cardholders and merchants, and each side affects the other. Costs play a significantly reduced role in determining the optimal interchange fee or price. There are effectively two demand and supply curves to determine the optimal price. Maximizing output requires issuers and acquirers to set prices in a way that will provide proper incentives for cardholders to use and merchants to accept the payment card. Balancing costs in some fashion would achieve this result only if the elasticity of demand on both sides were equal. Furthermore, setting the fee to zero would maximize output only if on both sides of the two-sided market costs and demand were equal. Because neither is likely to be true, one should not expect either a cost-based or zero interchange fee to be optimal. This conclusion is supported by the newspaper subscription and advertising revenues described in an earlier footnote. In both the newspaper and the payment card cases, revenue transfers are necessary to maximize overall social welfare.

Allowing Merchants to Pass Through the Interchange Fees

Some analysts would lift the prohibition that keeps merchants from surcharging card transactions. They believe that this would be fair because it would place the costs of the interchange fee on the party generating the costs. If the merchant was free to charge extra for using a particular card, cardholders would be paying the interchange fees that card issuers charge to the merchants. The card issuer would lose transaction volume, if the cardholders shift to another card with lower

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11 There are partial demand curves and that unless the partial demand curves are identical, using cost-based regulation to determine the per transaction fee to maximize the payment card system’s output would only occur by chance.

interchange fees or pay by cash as a result of the surcharge. This would give issuers an incentive not to raise the interchange fee above the optimal levels. However, a surcharge solution has practical as well as theoretical concerns. There is empirical evidence that suggests that high-volume merchants are reluctant to impose surcharges because of the administrative costs associated with alternative methods of payment such as the cost of handling cash.\footnote{Steve Semeraro, “Credit Card Interchange Fees: Three Decades of Antitrust Uncertainty,” \textit{Thomas Jefferson School of Law, San Diego, California, Legal Studies Research Paper Series}, March 6, 2007. p. 70.} Most important, merchants will not impose surcharges because of fear of losing customers to competitors who do not surcharge.

Theoretically, to maximize welfare in a two-sided market, a seller needs a way to discriminate between the two sides. When the rule prohibiting surcharge is eliminated, the division of benefits between merchants and cardholders becomes irrelevant. Only when the surcharge is constrained [with the no surcharge rule] does the payment card system concentrate on its charges on merchants and provide rebates to cardholders to induce card use.\footnote{Marius Schwartz &Daniel R. Vincent, \textit{Same Price, Cash or Card: Vertical Control by payment networks}, Working Paper 0201, February 2002, p. 47 at 3. Once the surcharge is unrestricted, only the payment system’s aggregate share would matter, because the market would no longer be a two-sided market.} In a case where greater volume is needed to optimize the efficiency of the payment card system, the surcharge would raise costs to the cardholder equal to at least the benefits that the issuer can provide to the cardholder from the interchange fee income. Consequently, merchant surcharging of card transactions would prevent issuers from stimulating card use in the circumstances where greater volume is needed to optimize the efficiency of the payment system.\footnote{Steve Semeraro, p. 20.}

A third solution to the interchange fee issue is the antitrust aspect of the payment card association, which is currently tied up in the courts. This solution is beyond the scope of this report. However, below, the report presents a summary of H.R. 5546 that is related to the antitrust solution. In that regard, the economic assessment of the issue may contribute to the judicial and legislative determination of whether the Visa and MasterCard associations are monopolies and whether the domination of these associations warrants granting limited antitrust immunity to providers and merchants to negotiate interchange fees. Even though Visa and MasterCard have dominated the payment card volume since the 1970s, some analysts argue that it is difficult to see how banks are able to control the system and collectively harm social welfare. The reason is that within the association, individual banks set virtually all their own fees and compete with each other. And, although interchange fees are set collectively, the associations are open to any bank or federally insured financial institution.\footnote{MasterCard and Visa have converted from associations to publically held companies, but merchants challenging the interchange fee have alleged that the banks have retained the same level of control as before the associations went public.} Others argue, however, that larger banks dominate the association, because larger issuing banks have lower costs than the
thousands of smaller issuers in the system. The more favorable cost structure enables larger banks to charge higher fees.

Credit Card Fair Fee Act of 2008 (H.R. 5546)

On March 6, 2008, H.R. 5546, the Credit Card Fair Fee Act of 2008, was introduced by the Chairman of the House Judiciary Committee, and the committee’s task force on competition policy and antitrust laws held a hearing on this bill on May 15, 2008. The House Judiciary Committee held a markup session on July 16, 2008, after which the bill was reported as amended to the full House.

The provisions of the bill would authorize providers in a single covered electronic payment system (e.g., Visa and MasterCard payment card associations) and any merchant to negotiate and agree upon rates and terms for accessing their electronic payment network. It defines the covered electronic payment system as any system that has been used for at least 20% of the combined dollar value of U.S. credit, signature-based debit, and PIN-based debit card payments processed in the applicable year. It grants limited antitrust immunity to such providers and merchants, as well as to those providers who determine among themselves the proportionate division of paid access fees. H.R. 5546 sets forth a procedure to determine rates and terms for access to a covered electronic payment system. It prohibits any other rates and terms from being imposed upon merchants for accessing a covered electronic payment system except as specified in a voluntarily negotiated access agreement. It creates a panel of three full-time Electronic Payment System Judges, appointed by the Antitrust Division of the Department of Justice and the Federal Trade Commission Bureau of Competition, to determine the schedule of rates and terms for three-year periods. H.R. 5546 subjects any determination of such judges to judicial review. And, it authorizes providers and merchants to enter in voluntarily negotiated access agreements and declares that such voluntarily negotiated access agreements shall be given effect between the signatories in lieu of any determination by the judges.17

Reaction to H.R. 5546

The bill is generally supported by merchant and consumer groups and opposed by payment card companies and the banking community, including credit unions. Merchant support for the legislation is reflected in a statement by John J. Motley of the Food Marketing Institute, “a major milestone in our long-standing campaign for a fair, competitive and transparent credit card interchange fee system. The credit card company cartels fix the fees at levels that far exceed actual transaction costs. This legislation gives retailers the right to negotiate reasonable fees with the Visa and MasterCard networks.” Consumer groups also supported the bill at the Task Force hearing on the bill. U.S. Public Interest Research Group consumer program director, Ed Mierzwinski, argued,

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“An oligopoly of issuers dominate the marketplace. They can do whatever they want. I am completely unconvincing that there is any competition in this marketplace. We are fortunate [the Antitrust Task Force] is shining light on the issue. This act would create a non-price control mechanism. It is a commonsense approach to the problem that will force the two sides to the bargaining table.”

The general council of Visa argued that the bill would suppress competition and innovation and result in unintended and harmful consequences for consumers. The American Bankers Association points out that the bill contains provisions that violate fundamental antitrust principles and will ultimately result in less competition and increased costs and reduced benefits for consumers. Despite receiving an exemption for most credit unions, the Credit Union National Association (CUNA) opposes government intervention in setting interchange fees. The Federal Trade Commission (FTC) opposed the bill because the commission has long discouraged exemptions from the antitrust laws, and the Justice Department’s Office of Legislative Affairs opposes the bill on similar grounds as the FTC.

One important issue raised at the hearing on H.R. 5546 that remains unresolved is whether merchants would pass on to their customers the savings they obtain from lower interchange fees. The representative from Visa suggested that there is no evidence that merchants have lowered their profits by passing on the lower cost of interchange fees to their customers. According to the testimony, there is little evidence that customers benefitted from the lower interchange fees, including the lower interchange fee case that was settled with Wal-Mart. In the case in Australia where the interchange fees were capped by regulation, the Royal Bank of Australia has not offered empirical estimates that savings from lower interchange fees have been passed on to consumers in terms of lower prices.

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22 Ibid.

Implications

The economic assessment of the two-sided market is a critical part of analyzing the interchange fee issue. Merchant complaints are focused on the rise of the merchant discount rate, indicating that the acquirer banks’ costs do not justify the merchant’s discount fee that they collect from them. However, it is not clear that the merchants fully account for the costs of the issuing banks that are included in the discount fee. There is some evidence that the amount of the merchant discount fee that the acquirer bank keeps is competitively determined; it is estimated to be about 0.5% of the transaction amount for most payment cards, including Discover and American Express. However, empirical evidence suggests that merchant’s acceptance of payment cards has little to do with the acquirer bank’s fees, because raising the acquirer fee did not show a reduction in card acceptance. Consequently, the focus turns to the cardholder and the issuing bank’s side of the market. On this side, there is evidence that payment card pricing has a dramatic effect on card usage because of the ease of switching to another card or method of payment. Cardholders avoid using a card rather than paying more, which may justify the card association making larger payments to the issuer banks, which lowers the costs to the cardholder but provides little perceived benefit to the merchants.

Another implication concerns the market mechanism that would reverse any anti-competitive behavior existing in the payment card industry. For example, if it is determined that the interchange fee is currently the result of anti-competitive behavior on the part of the card associations and issuing banks, interchange fees should arguably be lowered. What mechanism might be used to make sure that the price of the goods and services is lowered to reflect the lower interchange fees? Although experience has shown that interchange fees can be lowered by regulatory caps and other government restrictions, there has been little discussion of how to pass the excess fees back to the cardholders. If the government just lowers the fee with the expectation that merchants will pass the savings back to cardholders, it might not occur. The government’s regulatory caps would be redistributing revenues from the issuing banks to merchants. The result could be that the social benefit of the electronic payment card system is lowered, because the government’s action would lower revenues to the card-issuing banks, causing them to issue fewer than the optimal number of cards to cardholders. With fewer cardholders using the payment system, merchants may not see the growth in customers they had in the past.

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24 Steve Semeraro, p. 70.